

Fact Sheet

Final Voluntary Land-Based Wind Energy Guidelines

Advances in wind energy technologies and increased interest in renewable energy sources have resulted in rapid expansion of the wind energy industry in the United States. The U.S. Fish and Wildlife Service's final Voluntary Land-Based Wind Energy Guidelines will help shape the smart siting, design and operation of the nation's rapidly expanding wind energy operations.

These voluntary Guidelines provide a structured, scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development. They also promote effective communication among wind energy developers and federal, state, tribal, and local conservation agencies. In addition, the Guidelines provide Best Management Practices for site development, construction, retrofitting, repowering, and decommissioning. They take immediate effect and replace interim guidance published by the Service in 2003.

Early Involvement is Key

The most important thing a developer can do is to consult with the Service early in the development of a wind energy project. Early consultation offers the greatest opportunity for avoiding areas where development is precluded or where wildlife impacts are likely to be high and difficult or costly to remedy or mitigate at a later stage. By consulting early, project developers can also incorporate appropriate wildlife conservation measures and monitoring into their decisions about project siting, design, and operation.

Impacts to Wildlife

The Guidelines assist developers in identifying species of concern that may potentially be affected by their proposed project, including migratory birds; bats; bald and golden eagles and other birds of prey; prairie and sage grouse; and listed, proposed, or candidate endangered and threatened species. These impacts may include:

- Collisions with wind turbines and associated infrastructure; loss and degradation of habitat from turbines and infrastructure;
- Fragmentation of large habitat blocks into smaller segments that may not support sensitive species;
- Displacement and behavioral changes; and
- Indirect effects such as increased predator populations or introduction of invasive plants.

Tiered Approach

The Guidelines use a "tiered approach" for assessing potential adverse effects to species of concern and their habitats. The tiered approach is an iterative decision-making process for collecting information in increasing detail; quantifying the possible risks of proposed wind energy projects to species of concern and habitats; and evaluating those risks to make siting, construction, and operation decisions.

During the pre-construction tiers (Tiers 1, 2, and 3), developers will work with the Service to identify and avoid and minimize risks to species of concern. During post-construction tiers (Tiers 4 and 5), developers will assess whether actions taken in earlier tiers to avoid and minimize impacts are successfully achieving the goals and, when necessary, taking additional steps to reduce impacts.

Subsequent tiers refine and build upon issues raised and efforts undertaken in previous tiers. Each tier offers a set of questions to help the developer evaluate the potential risk associated with developing a project at the given location.

Briefly, the tiers address:

- Tier 1 – Preliminary site evaluation (landscape-scale screening of possible project sites)
- Tier 2 – Site characterization (broad characterization of one or more potential project sites)
- Tier 3 – Field studies to document site wildlife and habitat and predict project impacts
- Tier 4 – Post-construction studies to estimate impacts¹
- Tier 5 – Other post-construction studies and research

The tiered approach provides the opportunity for evaluation and decision-making at each stage, enabling a developer to abandon or proceed with project development, or to collect additional information if required. This approach does not require that every tier, or every element within each tier, be implemented for every project.

If sufficient data are available at a particular tier, the following outcomes are possible:

- The project proceeds to the next tier in the development process without additional data collection.
- The project proceeds to the next tier in the development process with additional data collection.
- An action or combination of actions, such as project modification, mitigation, or specific post-construction monitoring, is indicated.
- The project site is abandoned because the risk is considered unacceptable.

Adherence to the Guidelines is voluntary and does not relieve any individual, company, or agency of the responsibility to comply with laws and regulations. However, if a violation occurs the Service can consider a developer's documented efforts to communicate with the Service and adhere to the Guidelines.

The final Guidelines and all associated materials are available at www.fws.gov/windenergy.

¹ The Service anticipates these studies will include fatality monitoring as well as studies to evaluate habitat impacts.